EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2001027570
PUBLICATION DATE : 30-01-01

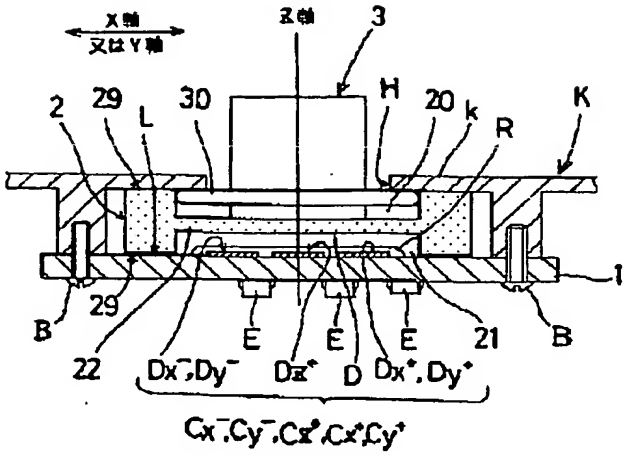
APPLICATION DATE : 13-07-99
APPLICATION NUMBER : 11198645

APPLICANT : WAKOO:KK;

INVENTOR : OKADA KAZUHIRO;

INT.CL. : G01L 1/14 G01L 5/16

TITLE : ELECTROSTATIC CAPACITY TYPE FORCE SENSOR



ABSTRACT : PROBLEM TO BE SOLVED: To obtain an electrostatic force sensor which reduces troublesome assembling operation, is easily made waterproof and dust-proof without increasing the number of components and has high sensitivity as a sensor.

SOLUTION: The sensor is equipped with a substrate 1 where fixed electrode groups Dx+ and Dx-, and Dy+ and Dy-, and Dz+ are formed, a movable electrode plate 2 which is formed of elastomer on the whole and also formed of conductive elastomer at least opposite the fixed electrode groups, and a hard operation part 3 which is formed in the same or a different body with or from the movable electrode plate 2 and can transmit a force to the movable electrode plate 2; and variable electrostatic capacity parts Cx+ and Cx-, Cy+ and Cy-, and Cz+ are formed of the fixed electrode groups and movable electrode plate 2.

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-125723
(43)Date of publication of application : 27.04.1992

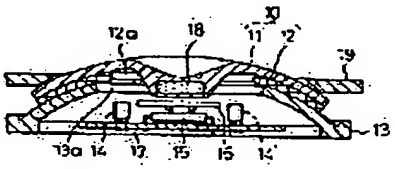
(51)Int.Cl. G06F 3/033
G06K 11/18

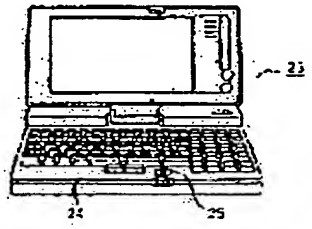
(21)Application number : 02-246116
(22)Date of filing : 18.09.1990

(71)Applicant : FUJITSU LTD
(72)Inventor : ARITA TAKASHI
SAKAGUCHI AKIHIKO
SASAKI TOSHINAGA

(54) POINTING CONTROLLER

(57)Abstract:
PURPOSE: To improve the operability by providing a pointing device, which operates a pointer on a display device, with a planar slider which can be slid in an arbitrary direction relatively to a supporting body and detecting the amount of movement of this slider and moving the pointer based on the detection result.
CONSTITUTION: A pointing controller 25 is provided on a keyboard 24 and operated with fingers. A slider 10 consists of an elastic member 11 and a domic member 12 having a hole 12a in the center. A housing 13 freely slidably supports the slider 10. The slider 10 is provided with a permanent magnet 18. Magneto- resistance elements 14 and 14' and a switch 15 are mounted on a printed board 17. When the permanent magnet 18 is moved in accordance with the movement of the slider 10, magneto- resistance elements 14 and 14' detect the change of a magnetic flux. Thus, displacements in X and Y directions of the slider 10 are detected. The pointer on the display device is moved by the acceleration control of the amount of the variation at this time.





LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]